

Title (en)

TRADING T-GATES FOR QUBITS IN ARBITRARY STATE AND UNITARY SYNTHESIS

Title (de)

EINTAUSCHEN VON T-GATES GEGEN QUBITS IN WILLKÜRLICHEM ZUSTAND UND EINHEITLICHER SYNTHESE

Title (fr)

NÉGOCIATION DE GRILLES EN T POUR BITS QUANTIQUES DANS UNE SYNTHÈSE D'ÉTAT ARBITRAIRE ET UNITAIRE

Publication

EP 3857466 A1 20210804 (EN)

Application

EP 19809938 A 20191030

Priority

- US 201862752887 P 20181030
- US 201916439531 A 20190612
- US 2019058906 W 20191030

Abstract (en)

[origin: US2020134107A1] Notably, this it proven to be optimal up to logarithmic factors for any $\lambda=o(\sqrt{N})$ through an unconditional gate counting argument. Though (N) Clifford gates are always required, only (\sqrt{N}) T-gates are needed in the best case, which is a quadratic improvement over prior art. Similar statements are provien for unitary synthesis by reduction to state preparation.

IPC 8 full level

G06N 10/00 (2019.01)

CPC (source: EP US)

G06F 30/327 (2020.01 - US); **G06N 10/00** (2018.12 - EP US); **G06F 2111/10** (2020.01 - US)

Citation (search report)

See references of WO 2020092601A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

DOCDB simple family (publication)

US 10997337 B2 20210504; **US 2020134107 A1 20200430**; EP 3857466 A1 20210804; WO 2020092601 A1 20200507

DOCDB simple family (application)

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